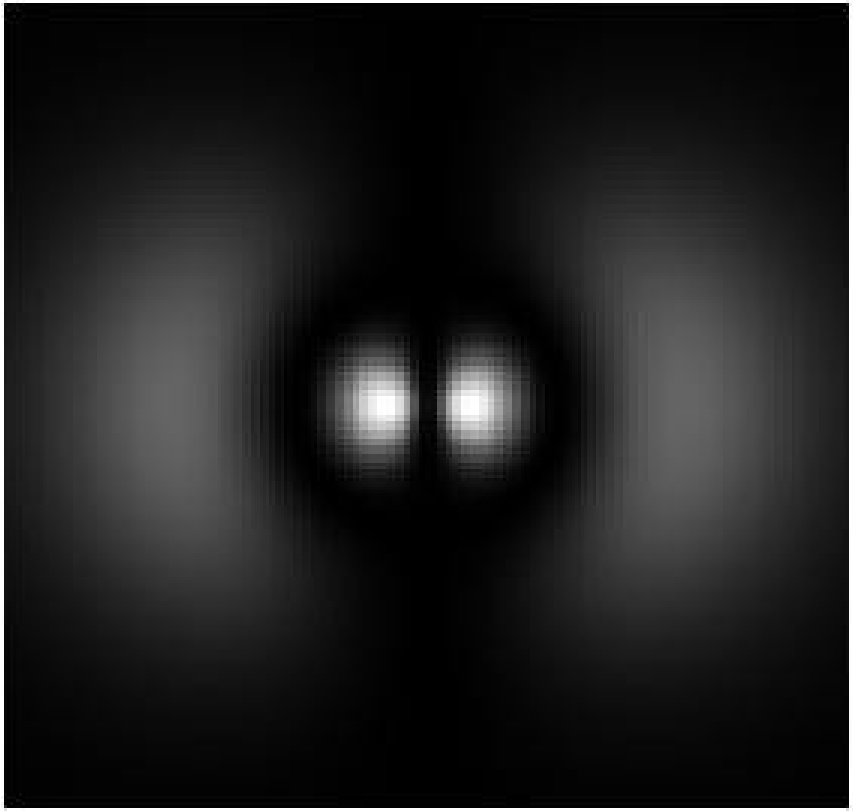

Cross-sectional view of the electron probability density for the n = 3 and *l* = 1 hydrogen orbital. The total number of nodes is n – 1 = 2, the number of spheric nodes = n – *l* – 1 = 1, and the number of planar nodes is *l* = 1. So this orbital shows both a spherical and a planar node. Since n = 3 and *l* = 1, this orbital is given the name 3p.